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**AT PERISCOPE DEPTH: EXPLORING SUBMARINE
PROLIFERATION IN SOUTHEAST ASIA**

by

Corwin J. Hardy

September 2015

Thesis Advisor:
Co-Advisor:

Michael S. Malley
James Clay Moltz

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SOUTHEAST ASIA**

Corwin J. Hardy
Lieutenant, United States Navy
B.S., Oregon State University, 2008

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September 2015**

Approved by: Michael S. Malley
Thesis Advisor

James Clay Moltz
Co-Advisor

Mohammed M. Hafez
Chair, Department of National Security Affairs

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ABSTRACT

Submarine proliferation in the post–Cold War environment has led to an exponential increase in the number of regional submarine operators and begs the question: Were these submarine purchases made for deterrence, enforcement, prestige, or a combination of the three? This thesis compared the case studies of Indonesia, Malaysia, Singapore, and Vietnam, analyzed statements made by government and defense officials, and weighed each against the regional security environment to determine states' rationales for purchasing submarines. Indonesia, Malaysia, and Singapore likely purchased submarines for deterrence and enforcement, and Vietnam for deterrence. The deterrence imperative for all states was relatively strong, but enforcement rationales varied; prestige lacked credible evidence as a rationale for submarine purchases. Future submarine proliferators, including the Philippines and Thailand, are likely to successfully acquire submarines when the deterrence or enforcement imperatives are strongest. These findings are significant because regional submarine operations that increase the potential for undersea conflict or accidents can be minimized if governments can reduce the threat perceptions of other states or find alternative, effective methods to enforce the maritime domain.

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LIST OF ACRONYMS AND ABBREVIATIONS

A2/AD	anti-access/area denial
AIP	air independent propulsion
ASC	Australian Submarine Corporation
C4I	command, control, communications, computers, and intelligence
DCN	<i>Direction des Constructions Navales</i> (France)
EEZ	exclusive economic zone
FPDA	Five Powers Defence Arrangements
GDP	gross domestic product
HDW	<i>Howaldtswerke-Deutsche Werft</i> (Germany)
IADS	Integrated Air Defense System
ICJ	International Court of Justice
NGO	non-governmental organization
PLAN	People's Liberation Army-Navy (China)
RDM	<i>Rotterdamsche</i> (Netherlands)
RSAF	Republic of Singapore Air Force
RSN	Royal Singaporean Navy
SAF	Singapore Armed Forces
SCS	South China Sea
SLOC	sea lines of communication
TKMS	ThyssenKrupp Marine Systems (Germany)
TNI-AL	<i>Tentara Nasional Indonesia-Angkatan Laut</i> (Indonesian Navy)
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNMINET	United Nations Mission in East Timor
VPN	Vietnam People's Navy
3G	third generation

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I. INTRODUCTION

A. MAJOR RESEARCH QUESTIONS

In the last twenty-plus years since the end of the Cold War, several states in Southeast Asia have increased defense spending on a larger scale than the two preceding decades. Some analysts have concluded these expenditures were maintenance of the status quo or innocuous modernization efforts; however, the acquisition of submarines by several states in Southeast Asia makes recent defense spending patterns different. Specifically, the acquisition of submarines is a force multiplier for states that are otherwise unable to compete militarily with the likes of China. The adoption of undersea capabilities poses several questions, including: What are the motives for states in Southeast Asia to acquire submarines? Do these acquisitions represent a shortcut to maintain the status quo in the environment of a stronger China and others, or do they represent something else?

B. SIGNIFICANCE OF THE RESEARCH QUESTIONS

Military modernization in the decades after the end of the Cold War have included the proliferation of modern missile systems, aircraft, surface ships, and submarines on a scale that raised the eyebrows of analysts and prompted a significant amount of research.¹ This time period in Southeast Asia is significant for a number of reasons. The first is the combination of the disengagement of the United States and the collapse of the former Soviet Union, events that signaled to the region that the free-riding security guarantees of the major powers were no longer assured. Southeast Asian states had to make the choice to either align themselves explicitly with a security guarantor—which was avoided in the past—or to look to themselves for defense in what is described in as early as 1995 as “uncertainty based” defense calculation.² The second significant event in the time period of this research is the 1997 Asian Financial Crisis that derailed a

¹ Richard A. Bitzinger, “A New Arms Race? Explaining Recent Southeast Asian Military Acquisitions,” *Contemporary Southeast Asia* 32, no. 1 (2010): 50–69.

² J. N. Mak, “The ASEAN Naval Build Up: Implications for the Regional Order,” *Pacific Review* 8, no. 2 (1995): 303–4.

number of states looking to modernize their militaries, causing a scaling back of military expenditures in the short term.³ As a result, the ebb and flow of defense spending in the preceding decades gave analysts yet a third reason to research the time period: Why would states in Southeast Asia choose to or decline to continue spending large amounts of money on defense? More precisely, why would states make a larger investment in submarines? Finally, this time period is significant because China has also pursued a substantial military modernization program in the same timeframe, which created anxieties within the region.

On the surface, military modernization in Southeast Asia can be an innocent part of status quo modernization efforts or, by contrast, acquiring new arms and equipment can be characterized as an open arms competition.⁴ Yet, the significance of submarine proliferation as part of these modernization efforts is that submarines have an inherently different character—one that is predatory and rooted in secrecy.⁵ Thus, the regional proliferation of submarines is potentially destabilizing within the larger context of defense modernization efforts. Answering the research question will provide insight into why states acquire submarines and forecasts what can be done to either quell potential fears or make submarine operations safer and less destabilizing.

The purpose of the research that will follow is to explore why states decided to include submarine proliferation as part of their modernization endeavors. For the majority of states in Southeast Asia, the acquisition of submarines does not clearly follow patterns of status quo modernization and is a new asset in states' portfolios of weapons technologies.⁶ The significance for Southeast Asia with respect to submarine proliferation is that these acquisitions will likely force fundamental changes to defense policy that must consider the possibility of an undersea threat.

³ "Underwater Aspirations Break the Surface in SE Asia," *Jane's Navy International* 116, no. 9 (2011), <http://search.proquest.com/docview/896649289?accountid=12702>.

⁴ Bitzinger, "A New Arms Race," 52–60.

⁵ Aaron Beng, "Submarine Procurement in Southeast Asia: Potential for Conflict and Prospects for Cooperation," *Pointer Journal of the Singapore Armed Forces* 40, no. 1 (2014): 60, http://www.mindef.gov.sg/content/imindef/publications/pointer/journals/2014/v40n1/feature5/_jcr_content/imindefPars/0003/file.res/C%3A%5CLTC%20Aaron%20Beng.pdf.

⁶ Ibid.

This thesis can shed light on the scholarly and policy debates regarding military modernization and submarine proliferation in Southeast Asia that have serious security implications. To this point, exploration and research into military modernization in Southeast Asia have weighted submarine acquisitions equally among the menu of technologies that have proliferated over the last two decades. Exploring submarine proliferation separately from other technologies, however, can provide insight into state behavior that might otherwise be difficult to ascertain under the framework of general military modernization.

C. LITERATURE REVIEW

The scholarship with respect to military modernization in Southeast Asia not only examines the wholesale trends of acquisitions in the region, but also offers sound insights into why states may decide to pursue some technologies over others—including where submarines may fit into larger defense strategies. First, this review will outline several hypotheses that identify the regional concerns driving military modernization more generally. Second, this review will identify separate hypotheses in that explain submarine proliferation specifically, as opposed to general modernization. Third, this review will identify four Southeast Asian cases that will be researched to explain the rationale for submarine acquisitions in that geographical area.

1. Military Modernization

There are several hypotheses in the existing literature to explain the explosion of defense spending for general military modernization and provide background that may help explain submarine proliferation, which will be discussed separately. These hypotheses are: regional security uncertainties borne from the end of the Cold War, creating a need for self-reliant defense; the desire to provide for the indigenous defense of territorial waters; and a rising, aggressive Chinese military.⁷ Each argument is couched in some empirical evidence and is worthy of discussion.

⁷ Richard A. Bitzinger, “The China Syndrome: Chinese Military Modernization and the Rearming of Southeast Asia,” Working paper, S. Rajaratnam School of International Studies, no. 126 (2007): 5–10; Mak, “The ASEAN Naval Build Up,” 303–4; Bitzinger, “A New Arms Race?” 52–60.

One hypothesis that may explain the origin of military modernization efforts in Southeast Asia post-1991 is that the end of the Cold War brought disengagement by the great powers as security guarantors.⁸ The absence of superpower rivalry, coupled with a lack of interest in Southeast Asia as a whole, caused the United States and the now-defunct Soviet Union to uncouple their security strategies from the region. Furthermore, there was a fear that the United States, as the surviving hegemon from the Cold War, would be an unreliable ally and only act in its self-interest. The result was states taking a greater stake in their own security and accepting modernization of their militaries as a necessary condition to guarantee their own security, following the realist logic of self-help.⁹

A second hypothesis in the research is that regional navies want to protect their territorial waters and exclusive economic zones (EEZs) against not only big power interference but also the nontraditional threats of terrorism and piracy, thus requiring a modern military to achieve these objectives.¹⁰ Patrol craft; command, control, communications, computers, and intelligence (C4I) technology; aircraft; and small arms are among the host of military equipment that states purchased to patrol their own waterways. As part of Richard A. Bitzinger's 2010 argument, states such as Malaysia and Vietnam are modernizing for this purpose; furthermore, Malaysia established a coast guard in 2005 to patrol its EEZ and "safeguard the Malacca Straits from terrorism and piracy."¹¹

A third prominent hypothesis in the literature is that China, as the regional hegemon, dominates the defense anxieties of most states in the region and is the primary motivator behind military modernization.¹² Both J. N. Mark in as early as 1995 and Bitzinger in a working paper from 2007 and article from 2010 ascribe the spike in defense spending to a host of causes but recognized that a rising China plays a major role

⁸ Bitzinger, "The China Syndrome," 5–10; Bitzinger, "A New Arms Race?" 53–54; Mak, "The ASEAN Naval Build Up," 303–4.

⁹ Ibid.

¹⁰ Bitzinger, "A New Arms Race?," 53–54.

¹¹ Ibid.

¹² Mak, "The ASEAN Naval Build Up," 303–4; Bitzinger, "The China Syndrome," 5–10.

in the buildup of arms and technology in Southeast Asia.¹³ This hypothesis follows realist logic that states in Southeast Asia are recognizing the growing military power asymmetries between themselves and China and are seizing the opportunity to close the gap in capabilities—although that may be difficult to do considering China’s enormous wealth.

2. Submarine Proliferation

Separate from the hypotheses to explain military modernization, submarine proliferation itself is a different trend requiring further examination. The literature on submarine proliferation is focused in large part on individual states’ submarine programs and capabilities; yet, examining more literature can help explain the procurement rationales for not only those states that have acquired submarines but also others that have expressed interest. The prominent hypotheses in the literature to explain submarine proliferation include deterrence; enforcement of territorial claims, EEZs, and territorial waters; and state prestige.¹⁴

The deterrence hypothesis is pervasive in the literature and argues that the purchase of submarines is intended to deter China from operating in the territorial waters and EEZs—claimed or otherwise—of states in Southeast Asia, where up to now China has been able to operate with relative impunity.¹⁵ The logic is that if China knows a state has submarines that it may be less adventurous, lest a nearby submarine threaten its ships. In a 2011 *Jane’s Navy International* article, the author cites a former Indian submarine commander’s rationale for submarine proliferation that echoes this hypothesis: “it is inevitable that small regional navies will seek to acquire submarines for their deterrence value in the face of a growing People’s Liberation Army Navy and China’s increasing

¹³ Ibid.; Bitzinger, “A New Arms Race?,” 53–54.

¹⁴ “The Submarine Race in Asia,” *New York Times*, January 7, 2014, <http://www.nytimes.com/2014/01/08/opinion/the-submarine-race-in-asia.html?emc=eta1>; John Pomfret, “Concerned about China’s Rise, Southeast Asian Nations Build Up Militaries,” *Washington Post*, August 9, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/08/08/AR2010080802631.html>; “Underwater Aspirations Break the Surface”; Walter C. Ladwig III, “India and Military Power Projection: Will the Land of Gandhi Become a Conventional Great Power?,” *Asian Survey* 50, no. 6 (2010): 1167–8; Bitzinger, “A New Arms Race?,” 63.

¹⁵ “Submarine Race in Asia.”

influence.”¹⁶ Furthermore, *Jane’s* and others argue “a small force of submarines...can conduct effective sea denial/anti-access operations because they are force multipliers, tying down a disproportionate number of hostile assets.”¹⁷ In short, submarines offer an opportunity to close the large military gap with China because of their unique deterrent value.

A second hypothesis explaining submarine proliferation is that submarines are an enforcement platform in the maritime domain not only in territorial waters and EEZs, but also in strategic waterways and territorial claims. The idea behind submarines in this case is that because of the vast amount of territory to patrol, submarines provide a cost-effective method to accomplish this objective while simultaneously providing a form of power projection (i.e., showing the flag) in the region to publicly show that the area is being monitored by the interested state.¹⁸ For example, Vietnam has interests in enforcing its territorial claims in the Spratly and Paracel Islands, and Indonesia must patrol its nearby critical straits and the Celebes Seas, and those governments’ interest in submarines may be in support of those desires.

A third hypothesis to explain submarine proliferation Southeast Asia is prestige. This argument follows that states are procuring submarines in a back-and-forth game of showing off the latest technology, including submarines, to prove that it is just as capable as its competitors.¹⁹ For example, Malaysia accelerated its submarine acquisition program after Singapore purchased submarines.²⁰ Some researchers are quick to point out, however, that these procurements fall short of an arms race and can better be described as an arms competition.²¹

¹⁶ “Underwater Aspirations Break the Surface.”

¹⁷ Ibid.; Beng, “Submarine Procurement in Southeast Asia,” 55–60.

¹⁸ “Underwater Aspirations Break the Surface”; Ladwig III, “India and Military Power Projection,” 1167–8.

¹⁹ Bitzinger, “A New Arms Race?” 63.

²⁰ “Malaysia Submarine Capabilities,” Nuclear Threat Initiative, last modified July 29, 2013, <http://www.nti.org/analysis/articles/malaysia-submarine-capabilities/>.

²¹ Ibid.; 51–52; “Underwater Aspirations Break the Surface”; Beng, “Submarine Procurement in Southeast Asia,” 55–63.

The case studies selected for this thesis—Indonesia, Malaysia, Singapore, and Vietnam—are those with small, developing submarine fleets and were selected because of their geographic location, proximity to other submarine states, and variance. Each state provides an opportunity to weigh the importance of several hypotheses across different cases with competing state interests. The cases of Laos, Cambodia, Thailand, and the Philippines were excluded for parsimony. Rhetoric and expressed desires alone to acquire submarines are insufficient to explain proliferation because the process of purchasing specific platforms from a host of suppliers, establishing a maintenance and manning program, and operating submarines at sea each provide clearer evidence that can support different hypotheses for proliferation. Australia was also excluded as a case study because the state's first six submarines were each built indigenously (far beyond the capability of its neighbors) and because of its resemblance to the United States with respect to defense policy.²²

3. Indonesia

Indonesia was the first Southeast Asian state to acquire submarines, with the first platform entering service in 1981.²³ For Indonesia, the world's largest archipelagic state, patrolling its vast coastline is of utmost importance and its desire to procure submarines may reflect several of the hypotheses mentioned above. Underlying Indonesia's military modernization is the reality that the sheer size of Indonesia's coastline and its proximity to a number of critical sea lines of communication (SLOCs) demands a large fleet to patrol the area—on the order of hundreds of vessels—of which the navy is far short. In short, Indonesia's size, location, and defense interests make it a compelling case to explore submarine proliferation.

4. Malaysia

The Malaysian case study bears a number of similarities to the Indonesian and Singaporean cases, from territorial disputes in the South China Sea to the desire to protect

²² "Australia Submarine Capabilities," Nuclear Threat Initiative, last modified July 15, 2013, <http://www.nti.org/analysis/articles/australia-submarine-capabilities/>.

²³ John Moore, ed., *Jane's Fighting Ships 1982–83* (New York: McGraw-Hill, 1983), 215–6.

its own territorial waters. Although the Asian Financial Crisis derailed prior ambitions of purchasing submarines, Malaysia's program gained momentum after Singapore successfully procured submarines—making the prestige hypothesis worth exploration.²⁴ Furthermore, because Malaysia's submarines are home ported in Sabah, away from its most critical waterways, the acquisition of submarines is curious.²⁵ Eventually, Malaysia purchased two new French-made *Scorpène*-class submarines in 2002 via cash and barter, and trained their sailors in France to operate its submarines.²⁶ In short, the Malaysian case is worth further exploration because its geopolitics and commitment to procuring submarines in the wake of a financial crisis could have precluded significant spending.

5. Singapore

Singapore, like its neighbors, considers its proximity to a number of critical waterways—namely the Strait of Malacca and Singapore Strait—to be of prime importance.²⁷ Singapore's small size and important territorial waters commands a great deal of responsibility that the Royal Singaporean Navy (RSN) is determined to support. Bitzinger described Singapore's third generation (3G) transformation of its military, which aims to leverage C4I to counter nontraditional threats and supports its stated objective of protecting its maritime interests.²⁸ Preliminary research suggests that Singapore has a deterrent imperative for submarines that will be explored in greater detail. In summary, the Singaporean case study is valuable because it is both wealthy and small, making it curious that submarines were procured.

6. Vietnam

Although Vietnam lacks the proximity to the Malacca and Singapore Straits like the other case studies it is the closest Southeast Asian submarine state to China, which is

²⁴ "Underwater Aspirations Break the Surface"; "Malaysia Submarine Capabilities."

²⁵ "Malaysia Submarine Capabilities."

²⁶ "Underwater Aspirations Break the Surface"; Bitzinger, "The China Syndrome," 12–15.

²⁷ "Indonesia Submarine Capabilities," Nuclear Threat Initiative, last modified August 2, 2013, <http://www.nti.org/analysis/articles/indonesia-submarine-capabilities/>; Beng, "Submarine Procurement in Southeast Asia," 56.

²⁸ Bitzinger, "The China Syndrome," 16–17.

one of the adversarial states of concern that this thesis will explore. Like the other case studies, Vietnam does share the same emphasis on the sea as part of its national security strategy and buoyance of the national economy. John Pomfret, in a 2010 *Washington Post* article, offers his summary of the Vietnam case study: “Experts generally agree that Vietnam’s weapons acquisitions program is the most significant because it appears singularly focused on deterring China [and] in essence, Vietnam is attempting to make its coastal defenses strong enough so that China will think twice about pushing its claims.”²⁹ Bitzinger identified the disengagement of the United States in the post–Cold War environment as further support for Vietnam’s self-reliance strategy to deter China, in which submarines play a part.³⁰ Vietnam is a compelling case study for this thesis because preliminary research suggests that China a singular focus for its submarine program.

D. POTENTIAL EXPLANATIONS AND HYPOTHESES

The scope and depth of this thesis will allow the exploration of each hypothesis across the selected case studies. The hypotheses to explain military modernization as a baseline for submarine acquisition include state self-defense after the Cold War, a rising China, and the requirement for indigenous defense of territorial waters. The hypotheses selected for further research to explain submarine proliferation in Southeast Asia include deterrence, enforcement of states’ maritime interests, and exhibition of state prestige.

The first hypothesis that this thesis will investigate to explain military modernization is that following the Cold War, states decided that modernizing their militaries was necessary for self-defense because protection provided by the superpowers was no longer a guarantee. Second, many Southeast Asian states identify the importance of the sea to the economy and the necessity of unimpeded commerce to patrol territorial waters. The third hypothesis of a rising Chinese military power asymmetry, which mandates that states modernize their militaries, will also be explored.

²⁹ Pomfret, “Concerned about China’s Rise.”

³⁰ Bitzinger, “The China Syndrome,” 20.

The first hypothesis for submarine proliferation that this thesis will investigate is that submarines are being acquired to deter regional military threats. Specifically, China is often identified as the regional hegemon that creates the biggest insecurities for Southeast Asian nations. Researchers offer strong evidence to support the China deterrence hypothesis and it will be explored in more detail. A second hypothesis requiring further research is that states purchased submarines to enforce their territorial claims and EEZs, and that submarines are a form of power projection to achieve this objective.

The third hypothesis selected for this thesis to explain submarine proliferation is state prestige. Although some researchers suggest that submarines can be used to gather intelligence, deter larger militaries, and patrol vast expanses of territory, the national security objectives of the cases examined all identify the importance of the maritime domain as it relates to commerce.³¹ Using this logic, keeping vital waterways open for business is the prime objective. Short of preventing other submarines from sinking cargo vessels, submarines—in this case—are weak assets compared to law enforcement or coast guard vessels to stop piracy and terrorism. Although submarines do possess a robust mission set, the primary mission of hunting other submarines remains the most vital. Thus, a more persuasive hypothesis might be prestige. This argument follows the logic that developed states with advanced militaries have submarines and that smaller states, looking to be viewed in the same light, are spending large amounts of money for a relatively modest purpose. In the case of Malaysia, for example, its submarine proliferation program was ratcheted up after Singapore procured its first submarines, spending more than US\$1 billion for two platforms—a rather small improvement.³²

E. RESEARCH DESIGN

This thesis will examine the overall themes present in the scholarship concerning submarine proliferation and evaluate their potency against four case studies within Southeast Asia, with the selected states hosting submarine programs and having stated

³¹ Bitzinger, “A New Arms Race?” 63; Beng, “Submarine Procurement in Southeast Asia,” 56–60.

³² Pomfret, “Concerned about China’s rise.”

their interest in submarines. Specifically, this thesis will compare the cases of Indonesia, Malaysia, Singapore, and Vietnam. The comparative method of this research is intended to provide an empirical assessment of each hypothesis against the selected cases. Furthermore, this research method avoids biasing the data to support a single case (e.g., Vietnam's program as a response to counter China's regional aggression), and instead allows an examination of the strength of the selected hypotheses across a diverse spectrum of cases with varied national interests and histories.³³ This thesis is not intended to identify a winner among the competing hypotheses, but rather to identify the strongest argument for each case and determine what, if any, patterns exist.

This thesis will gather evidence from a wide range of resources to include reports from relevant conferences hosted by both academic and international institutions—e.g., ASEAN, RSIS; reports from non-governmental organizations (NGOs); journal and newspaper articles; think tank reports; working papers and op-eds; and relevant books. This thesis will not include human subjects because the scope of the research will not permit gathering individual data or soliciting opinions of foreign military members and government officials. The selection of the stated resources allows the research to cover a broad spectrum of information from both inside and outside government while simultaneously providing sufficient depth to answer the research question.

F. THESIS OVERVIEW

This thesis first addresses the research questions and their importance to the available scholarship with respect to submarine proliferation and regional security studies. Chapter I identifies the themes from the research with respect to states' rationales for acquiring submarines in the contemporary security environment. After identifying the relevant hypotheses, the thesis devotes a chapter to each case study. The case study chapters provide an overview of the security issues the state has faced and a timeline that

³³ Pomfret, "Military Bulk Up in Southeast Asia"; Greg Torode and Minnie Chan, "Vietnam Buys Submarines to Counter China; Hanoi Seals Arms Deal With Moscow Amid China's Naval Build-Up, and Cosies Up to U.S.," *South China Morning Post*, December 17, 2009, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=7XBC-S000-Y9M4-K1YM&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>.

shows the progression of its submarine program. Each case study then examines the robustness of the 'Chapter I's findings against the backdrop of that state's national security goals and interests, using empirics to support or refute each hypothesis. The end of each chapter identifies the strongest arguments present in that specific case. The thesis's conclusion aggregates the first chapter's findings across the case studies and presents an argument that best answers the research questions and can best forecast other states' security-related military hardware purchases and the rationale behind such purchases.

II. INDONESIA

A. INTRODUCTION

Indonesia was the first state in Southeast Asia to operate submarines, with its first submarine entering service in the early 1960s, and the size and capacity of its submarine fleet has ebbed and flowed in the last fifty years to reflect the dominant security challenges and financial situation of the time. Indonesia's submarine-seeking behavior has sought to leverage several low-intensity conflicts and crises into existential threats that mandated the costly purchase of more submarines. Yet, only small-scale endeavors to acquire submarines have succeeded to date.

B. BACKGROUND/COLD WAR ERA

After declaring its independence in 1945, Indonesia made significant efforts to modernize its military that included acquiring submarines. In 1961, Indonesia reached an agreement to buy 12 Whiskey-class submarines from the Soviet Union as part of a larger arms deal that included hardware for the army and air force.³⁴ At its peak in 1963, the Indonesian submarine fleet was said to have as many as 20 Whiskey-class submarines; however, only 12 years later, in 1975, the number of operational platforms numbered as few as two.³⁵ Indonesian planners were inadequately prepared to train submariners and to build the necessary infrastructure to maintain their submarines, and underestimated the extent of the necessary tropicalization modifications that the Soviet-built submarines required.³⁶ Furthermore, the hulls were purchased secondhand and thus had a shortened

³⁴ "Soviet, Indonesia Ratify Anti-Dutch Arms Deal," *Washington Post*, March 5, 1961, ProQuest, <http://search.proquest.com/docview/141536382?accountid=12702>; Agung Pramono, "The History of the Indonesian Submarine Squadron," *Undersea Warfare*, no. 50 (2013), http://www.public.navy.mil/subfor/underseawarfaremagazine/Issues/Archives/issue_50/IndonesianSubSquadron.html.

³⁵ Igor Oganessoff, "Asian Cuba," *Wall Street Journal*, February 20, 1963, ProQuest, <http://search.proquest.com/docview/132892361?accountid=12702>; John E. Moore, ed., *Jane's Fighting Ships 1975-76* (New York: McGraw-Hill, 1976), 175; Jack McCaffrie, "Submarines for South-east Asia," in *Naval Modernisation in South-East Asia: Nature, Causes and Consequences*, edited by Geoffrey Till and Jane Chan (New York: Routledge, 2014), 32.

³⁶ McCaffrie, "Submarines for South-east Asia," 32.

life cycle upon delivery. The plan to acquire submarines was successful yet the integration and maintenance of these platforms was ill conceived.

In 1977, Indonesia purchased two new *Type-209*-class submarines from East Germany, which entered into service in 1981 as the Cakra-class, with plans for four additional platforms.³⁷ The German submarines came at just the right time for the aging fleet; however, plans for the additional four hulls were scrapped following an Indonesian economic crisis in the late 1970s, the enormous cost of refit for the two existing Cakra-submarines in the late 1980s, and concerns about the suitability of the design for future use.³⁸ Before the collapse of the Soviet Union, no further submarine negotiations took place and refitting its existing submarine fleet was the priority.

The Cold War era of Indonesian submarine purchases were the most robust in Southeast Asia and were likely procured for the purposes of deterrence with respect to the 1961 deal and prestige in the case of the 1977 deal. At the time of the 1961 submarine purchases, Indonesia recalled its war with the Dutch for independence and anticipated that future conflict in New Guinea would require more formidable hardware, and an argument can be made that the rationale for the purchase of submarines at this time were to deter its more powerful, familiar foe.³⁹ After the 1961 military hardware agreement with the Soviet Union, Indonesian defense minister Abdul Ilaris Nasution, presented the rationale for the deal—which included submarines: “the Dutch recently have strengthened their armed force in West Irian (West New Guinea) and have carried out all kinds of provocations, so there is no other way for Indonesia to save itself except by building up the strength of its armed forces.”⁴⁰ The border conflict with Malaysia on the island of Borneo in the mid-1960s further reinforced that deterrence was necessary. For

³⁷ “Indonesia Submarine Capabilities”; Moore, ed., *Jane’s Fighting Ships 1982–83*, 215–6.

³⁸ Peter McCawley, “Some Consequences of the Pertamina Crisis in Indonesia,” *Journal of Southeast Asian Studies* 9, no. 1 (1978): 1–2; Richard Sharpe, ed., *Jane’s Fighting Ships: 1991–92* (New York: McGraw-Hill, 1992), 275.

³⁹ “Soviet, Indonesia Ratify Anti-Dutch Arms Deal”; “Red Arms to Bolster Indonesian Threat,” *Christian Science Monitor*, December 29, 1961, ProQuest, <http://search.proquest.com/docview/510290191?accountid=12702>.

⁴⁰ Quoted in “Soviet, Indonesia Ratify Anti-Dutch Arms Deal,” *Washington Post*, March 5, 1961, ProQuest, <http://search.proquest.com/docview/141536382?accountid=12702>; “Red Arms to Bolster Indonesian Threat.”

Indonesian president Sukarno, the formation of Malaysia in close proximity was a direct threat to Indonesia and required a formidable deterrence because “Indonesia is ‘encircled by enemies’”; Defense Minister Nasution echoed Sukarno’s assessment: “to the north of us neocolonialism is moving toward what has been described as an encirclement of Indonesia.”⁴¹ When Indonesia considered the security situation in its immediate vicinity, the environment was dangerous enough to demand submarines for deterrence.

The Pertamina oil and financial crisis in the late 1970s that preceded the purchase of the two Type-209 submarines in 1977 supported prestige as the rationale for that purchase because of funding shortages and because Indonesia lacked a legitimate military adversary after its border conflict with Malaysia was settled. Furthermore, Indonesia’s state-owned Pertamina oil company provided funding for the military and after its decline likely made such a large purchase almost prohibitive.⁴² First, between the mid-1960s and 1977, the Indonesian submarine fleet was rapidly shrinking and its precipitous decline highlighted the technical difficulty in maintaining an operational submarine fleet.⁴³ In other words, the Indonesian submarine program had a short half-life and was expensive. Second, up to 1977, the most noteworthy accomplishment of the fleet was in August 1965, when approximately thirty Indonesian Special Forces were deployed during an amphibious raid from a submarine, and five were captured by the Dutch; the relative success of that operation earned the crew of the submarine a prestigious medal.⁴⁴ A third piece of evidence that advanced the prestige argument was articulated by Indonesian Rear Admiral Agung Pramono when he described Indonesia’s Cold War submarines: “superb underwater units,” “serving as a source of pride and self confidence for her people,” and that “the Navy expects to restore the glory of its naval forces, including its submarine

⁴¹ Quoted in Oganessoff, “Asian Cuba.”

⁴² McCawley, “Consequences of the Pertamina Crisis,” 1–2.

⁴³ George McArthur, “Indonesia Quietly Starting to Modernize its Hopelessly Outmoded Military Force,” *Los Angeles Times*, November 25, 1977, ProQuest, <http://search.proquest.com/docview/158398430?accountid=12702>

⁴⁴ “Dutch Say Indonesia Put 30 Ashore in New Guinea,” *New York Times*, August 26, 1962, ProQuest, <http://search.proquest.com/docview/116055562?accountid=12702>; Pramono, “History of the Indonesian Submarine.”

squadron.”⁴⁵ It is difficult to argue that the Cold War era hulls were wildly successful, let alone that their utility matched their cost.

C. POST–COLD WAR ERA

At the close of the Cold War, Indonesia was the only state in Southeast Asia that operated submarines.⁴⁶ In the two decades that followed the collapse of the Soviet Union, several arguments were made to increase the size of the submarine fleet, even to as many as thirty-five hulls according to a former Indonesian military chief in 2002.⁴⁷ Negotiations started up again in the mid-1990s only to be derailed by the 1997 Asian Financial Crisis; later negotiations gained momentum after the state recovered from the crisis and Indonesia is on track to take delivery of a new submarine by 2020.⁴⁸

In the mid-1990s, negotiations took place with Germany for up to a half dozen more Type-209 submarines that only resulted in the delivery of two second hand hulls in September 1997, which were never refit nor integrated into the fleet because the program was defunded and cancelled.⁴⁹ In 2005, another proposed deal with Germany for additional Type-209 submarines via a trade agreement was discussed but never came to fruition.⁵⁰ Next, in 2007, Indonesia signed an agreement to purchase two Kilo-class submarines as part of a US\$1.2 billion military loan from Russia.⁵¹ Indonesian Defense Ministry Spokesman, Brigadier General Edy Butar Butar, confirmed the Russian deal and gave a brief explanation: “we still have two submarines we bought from Germany a long time ago, and now we are waiting for two submarines from Russia; so I would really like

⁴⁵ Pramono, “History of the Indonesian Submarine.”

⁴⁶ Mak, “ASEAN Naval Build Up.”

⁴⁷ “TNI Chief Pledges Not to Repeat Mark-Ups,” *Jakarta Post*, June 25, 2002, ProQuest, <http://search.proquest.com/docview/288158412?accountid=12702>.

⁴⁸ McCaffrie, “Submarines for South-east Asia,” 33.

⁴⁹ Ibid.; Stephen Saunders, ed., *Jane’s Fighting Ships: 2005–2006* (New York: McGraw-Hill, 2006): 333.

⁵⁰ “Germany Offers Submarines to Indonesian Military,” *Xinhua News Agency*, April 5, 2005, ProQuest, <http://search.proquest.com/docview/452789436?accountid=12702>.

⁵¹ “Indonesian Purchase of Russian Submarines seen Pressuring Australia,” *BBC Monitoring Asia Pacific*, September 5, 2007, ProQuest, <http://search.proquest.com/docview/460895170?accountid=12702>.

to have more than four submarines.”⁵² In parallel with the Russian proposal, Indonesia entered into negotiations for three Chang Bogo-class submarines from South Korea’s Daewoo Shipbuilding Marine Engineering and announced the deal in December 2011, which stipulated that Indonesia’s PT PAL would build one of the submarines indigenously.⁵³ The Russian deal fizzled but the South Korean deal appears to be on track with the first hull to be delivered between 2018 and 2020.⁵⁴

In the case of post–Cold War submarine negotiations, Indonesian leaders considered deterrence and enforcement as rationales for submarine procurement, although the evidence overwhelmingly pointed to deterrence over enforcement.

Deterrence as a rationale for submarine purchases requires an adversary that defense planners considered in their analysis. Since 1991, the most likely adversarial candidates have been Australia and Malaysia. With respect to Australia, the United Nations (UN) mission in East Timor (UNMISSET) in 1999 resulted in the loss of Indonesian territory under an Australian-led UN coalition.⁵⁵ Shortly after the UNMISSET, Indonesia’s low-intensity conflict with Malaysia over the islands of Ligitan and Sipadan, which were awarded to Malaysia in a 2002 UN International Court of Justice (ICJ), resulted in what Indonesia perceived as the loss of its sovereign territory.⁵⁶ These outcomes were significant blows to what Indonesia viewed as its primary national security objective, namely defending the territorial integrity of its archipelagic state.⁵⁷

One example of a deterrence-minded approach to submarine acquisitions by Indonesia is present in its 2007 “Tri Dharma Eka Karma,” a cross-service doctrine that

⁵² Ibid.

⁵³ “Submarines for Indonesia,” *Defense Industry Daily*, last modified February 18, 2014, <http://www.defenseindustrydaily.com/submarines-for-indonesia-07004/>; McCaffrie, “Submarines for South-east Asia,” 33; Stephen Saunders, ed., *Jane’s Fighting Ships: 2013–2014* (New York: McGraw-Hill, 2014), 354.

⁵⁴ McCaffrie, “Submarines for South-east Asia,” 33; Saunders, *Jane’s Fighting Ships: 2013–2014*, 354.

⁵⁵ “East Timor – UNMISSET – Background,” United Nations, accessed June 18, 2015, <http://www.un.org/en/peacekeeping/missions/past/unmiset/background.html>.

⁵⁶ John G. Butcher, “The International Court of Justice and the Territorial Dispute Between Indonesia and Malaysia in the Sulawesi Sea,” *Contemporary Southeast Asia* 35, no. 2 (2013): 248.

⁵⁷ Ibid., 242–8.

expressed an overall desire to protect state sovereignty and territorial integrity, in which the navy and submarines have an important role. The document required that the military consider “force protection strategies with ‘deterrence’ and ‘denial’ capabilities.”⁵⁸ Although the doctrinal statements maintain the primacy of internal defense, the explicit acknowledgement of deterrence and denial as a means of achieving homeland defense necessitate a force projection capability that would likely include submarines.

Another example of deterrence exists in statements made about Malaysia in the decade after the ICJ’s 2002 ruling on the islands of Ligitan and Sipadan. In 2005, Indonesian First Admiral Abdul Maliki Yusuf stated that the Indonesian Navy (TNI-AL) would continue sending warships in the vicinity of two islands to dispute a Malaysian oil exploration contract to Shell, and did not rule out deploying a submarine to the area: “it is imperative that we also enforce our presence and sovereignty there.”⁵⁹ Although Admiral Yusuf mentions enforcement, which is the second argument in this case, the deployment of a submarine to directly respond to Malaysian activity points to deterrence—in which submarines are powerful assets. In a 2009 analysis of Indonesia’s security outlook and defense policy, Rizal Sukma articulated the concerns of some senior Indonesian officials with respect to the territorial dispute with Malaysia and how submarines could be involved:

Indonesia’s procurement policy to a certain degree reflects national security concerns, such as the need to protect Indonesia’s territorial sovereignty and border security. It is also driven by territorial disputes with neighbouring countries, especially Malaysia. When expressing the Navy’s interest in purchasing submarines, for example, the Head of Information Department of the Navy First Admiral Iskandar Sitompul explicitly referred to the “Malaysia factor” and stressed the need for Indonesia to acquire submarines with better deterrent effects than the Malaysian-owned Scorpene, such as the Russia’s Kilo class. He argued

⁵⁸ Leonard C. Sebastian and Iisgindarsah, “Assessing 12-Year Military Reform in Indonesia: Major Strategic Gaps for the Next Stage of Reform,” Working Paper, S. Rajaratnam School of International Studies, no. 227 (2011), 7, <http://dr.ntu.edu.sg/bitstream/handle/10220/7538/WP227.pdf?sequence=1>.

⁵⁹ “Indonesia Sends Navy in Dispute With Malaysia: Maritime Borders,” *Vancouver Province*, March 3, 2005, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=4FM4-SY80-TWD3-C2FW&csi=270944,270077,11059,8411&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

that Indonesia “must possess submarines with greater deterrent effect. If they [Malaysians] know we have that, they will be scared.”⁶⁰

Sukma’s analysis and the statements by Admirals Sitompul and Yusuf revealed that the territorial dispute—which was settled only in part by the ICJ ruling—loomed large in the thinking of some senior officials and that the decision to purchase additional submarines equipped with better technology was one response to this ongoing dispute.

Enforcement is the second, albeit weaker, hypothesis to explain Indonesian submarine acquisitions strategy since 1991. Statements made by Indonesian officials during post–Cold War negotiations reflected an attitude that reinforced the importance of protecting Indonesian territory, including claims in disputed areas. In the case of enforcement, submarines provide either visible or perceived presence in areas that the state holds, or claims to hold, sovereignty over—be it the natural resources therein or the waterway itself. Although territorial disputes may escalate and require that the submarine’s role transition from enforcement to deterrence, there is some evidence that submarine purchases were considered for the purposes of enforcement.

In April 2005, Aqlani Maza, an arms procurement agent for the Indonesian Ministry of Defense, stated that “Indonesia as an archipelagic country needs to acquire submarines” under a proposed agreement with Germany for more Type-209 hulls.⁶¹ A deal with Germany never came to fruition, however, Maza made the case that submarines were necessary because of the physical geography of Indonesia. Enforcement is necessary to protect vital sea lanes, territorial waters, EEZs, and territorial claims against a less-defined threat, and Indonesia’s massive coastline and the areas that it disputes—Ligitan and Sipadan among others—mandated that submarine be considered for this purpose. Furthermore, the statements made by Admiral Yusuf reflected enforcement imperatives that submarines could fulfill in addition to deterrence.

⁶⁰ Rizal Sukma, “Indonesia’s Security Outlook, Defence Policy and Regional Cooperation,” in *Asia Pacific Countries’ Security Outlook and Its Implications for the Defense Sector*, The NIDS Joint Research Series, no. 5 (2010); 19. http://www.nids.go.jp/english/publication/joint_research/series5/pdf/5-1.pdf.

⁶¹ “Germany Offers Submarines.”

Another official announcement that supported an enforcement agenda came in December 2010 from Deputy Naval Chief of Staff, Vice Admiral Marsetio, when he addressed a group of fellow Indonesian military officers: “We need to increase the number of submarines...[to] 39 submarines.” Marsetio continued, “as the world’s largest archipelagic country, Indonesia saw the urgency to have submarines in adequate numbers to protect its maritime sovereignty...[and] the addition of the 39 submarines would hopefully help the Indonesian Navy keep the country’s marine territory intact.”⁶² Given the budget difficulties of past years, this target is unlikely to be met but Admiral Marsetio’s statements were significant because of the enforcement language.

D. CONCLUSION

The evidence suggested that in the post–Cold War environment Indonesia pursued additional submarines for deterrence and that deterring Australia and Malaysia were significant motivators in Indonesia’s defense calculus. In the wake of two separate losses of Indonesian territory, protecting its remaining territory became a greater security priority for defense planners and evidence supporting deterrence for this purpose gained traction. By 2004, the need for enforcement began to surface in official statements, although the evidence supporting that hypothesis was weak.

⁶² “RI Needs 39 More Submarines,” *Antara*, December 22, 2010, ProQuest, <http://search.proquest.com/docview/876289543?accountid=12702>.

III. MALAYSIA

A. INTRODUCTION

Malaysia was the third state in Southeast Asia to acquire submarines, after Indonesia and Singapore respectively. It took delivery of its first submarine in 2007 after more than two decades of negotiations, bargaining, setbacks, and even charges of corruption in the process.⁶³ To date, the RMN has taken delivery of two submarines, Tunku Abdul Rahman and Tun Abdul Razak, and has made overtures that it desires more platforms to meet its territorial challenges and naval ambitions.⁶⁴

B. BACKGROUND/COLD WAR ERA

Malaysia can trace the roots of its submarine program to between 1979 when it published the Peta Baru, or “New Map,” which illustrated its territorial waters, continental shelf, and maritime claims, and 1982, when the UN Convention on the Law of the Sea (UNCLOS) gave legal status to its 200 nautical mile EEZ.⁶⁵ Both of these developments compelled the RMN to expand to adequately patrol its territory. In 1980, then-Malaysian Chief of the Navy Rear Admiral Mohammed Zain Saleh made the first public statement that suggested submarines would be necessary for this endeavor. According to Admiral Zain, “the Navy must change its present operational concept from that of coastal patrolling to...ocean surveillance,” and submarines were ideal assets to fulfill this role, albeit in the long term.⁶⁶

Zain’s successor as Chief of the Navy Vice Admiral Datuk Abdul Nawi continued to argue the merits of a submarine program: “the acquisition of even one submarine would not only be in line with the concept of self reliance but would be a vital first step

⁶³ “Underwater Aspirations Break the Surface”; “Malaysia Submarine Capabilities”; “Malaysian Submarine Scandal Resurfaces,” *Asia One News*, last modified July 2, 2012, <http://news.asiaone.com/News/AsiaOne+News/Malaysia/Story/A1Story20120701-356474.html>.

⁶⁴ “Malaysia Submarine Capabilities.”

⁶⁵ Butcher, “Territorial Dispute Between Indonesia and Malaysia,” 238–9.

⁶⁶ Quoted in James Goldrick and Jack McCaffrie, *Navies of South-East Asia: A Comparative Study* (New York: Routledge, 2013), Kindle edition, chap. 6.

toward the creation of a well-balanced fleet.”⁶⁷ The desire for submarines that Zain and Nawi articulated permeated multiple levels of naval leadership and was further reflected in a 1986 interview with a senior navy staff officer: “acquiring just one submarine, if not more, is like introducing an armored capability to what was previously an ‘infantry only’ army.”⁶⁸ In other words, submarines were a requirement for an outward-looking naval strategy that the navy was intent on pursuing.

By the end of the 1980s, negotiations took place for submarine training programs and platforms, as well as for new and used hulls, with France, the United Kingdom, Germany, and Sweden, among others.⁶⁹ As of 1989, Malaysia entertained deals from Great Britain’s Vickers Shipbuilding for *Oberon*-class submarines and Sweden’s Kockums shipyard for others. Additionally, Malaysia had been sending sailors to several states overseas for submarine training since 1980.⁷⁰ Yet, on the eve of the end of the Cold War in 1991, plans were still “some fifteen years away” according to senior Malaysian naval officers with knowledge of the situation.⁷¹

Malaysia’s inability to acquire submarines during the Cold War reflected not only the short planning window but also the security dynamics of the era. Before the 1979 Peta Baru, Malaysia was focused on internal security challenges that maintained primacy over any external threat that might have encouraged the purchase of submarines. After 1979, Malaysian defense planners identified the need for seaward defense and ocean surveillance, as Zain articulated. Yet, the U.S. military presence and Five Power Defence

⁶⁷ “The Royal Malaysian Navy: Gearing Up for the 1990s,” *Asian Defence Journal* (August 1986): 6.

⁶⁸ *Ibid.*; 10.

⁶⁹ Joris Janssen Lok, “Submarine Plan Put on Hold,” *Jane’s Defence Weekly* 16, no. 1 (1991): 7.

⁷⁰ James Adams, “Malaysia Buys British; Arms Order,” *Sunday Times (London)*, September 25, 1988, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=41B4-YK70-00YK-048S&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>; Lok, “Submarine Plan Put on Hold,” 7; “S’pore Joins Region in Acquiring Submarines to Modernize Navy,” *Straits Times (Malaysia)*, September 24, 1995, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=3SJD-P7V0-0058-X49R&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>.

⁷¹ Quoted in Lok, “Submarine Plan Put on Hold,” 7.

Arrangements (FPDA)—once the U.S. military presence waned in the late 1980s—precluded the immediate need for large military expenditures to counter external threats, and submarines by extension, because the external threat was not significant enough to mandate large indigenous purchases.⁷² Although the 1979 Peta Baru increased the importance of the maritime domain it had not yet elevated to the level that would have made submarines a critical asset worthy of the high cost. The FPDA for its own sake was—and still is—the set of arrangements that enabled a political-military dialogue among the member states of Singapore, Malaysia, the U.K., Australia, and New Zealand if the external security of Malaysia or Singapore was threatened. Although the arrangements failed to explicitly guarantee military intervention, it nonetheless provided a forum to discuss threats to Malaysia with foreign powers possessing more robust militaries and placed less strain on the Malaysian military to provide for its own defense.⁷³ Making matters worse in the 1980s, economic setbacks put any purchase of submarines even further out of reach.⁷⁴

In the face of U.S. disengagement in the late 1980s, what did this mean for Malaysia? In an August 1991 interview, then-Malaysian defense minister Mohamed Najib Abdul Razak argued that “the gradual withdrawal of American forces from the region makes it necessary for us to stand on our own feet in terms of defence...[and] the [FPDA] are very relevant in this context [because] they are still a good going concern which provide us with a security umbrella.”⁷⁵ Taking Mr. Najib’s statement in conjunction with statements made by Admiral Wahab in a 1990 interview, in which he argued that submarines were necessary to advance “forward defense”—read deterrence—the implicit guarantees provided by the U.S. and FPDA made the immediate acquisition

⁷² Michael Richardson, “Tightening Security Bonds: A Malaysian View,” *Asia Pacific Defence Reporter* 18, no. 2 (1991): 18–19.

⁷³ Damon Bristow, “The Five Power Defence Arrangements: Southeast Asia’s Unknown Regional Security Organization,” *Contemporary Southeast Asia* 27, no. 1 (2005): 5.

⁷⁴ Mohd Nizam Basiron and Lim Chee Kia, “The Modernisation of the Royal Malaysian Navy: Challenges, Trends and Implications,” in *Naval Modernisation in South-East Asia: Nature, causes and consequences*, ed. Geoffrey Till and Jane Chan (New York: Routledge, 2014), 137.

⁷⁵ Quoted in Richardson, “Tightening security bonds,” 18.

of submarines avoidable until financial resources were available.⁷⁶ In other words, planners recognized that submarines were necessary for deterrence in the future but put off their purchase in view of implicit security guarantees.

C. POST-COLD WAR ERA

In the first decade after the end of the Cold War, Malaysia failed to develop a submarine program because of the financial constraints of the 1980s, which carried over into the 1990s. The 1997 Asian Financial Crisis marked a further setback. In light of these financial constraints, the Malaysian navy continued training its sailors overseas and expanded its network of training and purchasing partners to more than a half dozen suitors, including Australia, Pakistan, India, Turkey, the Netherlands, Great Britain, Sweden, France, and the recently-reformed Russia.⁷⁷ Entering the new millennium, however, negotiations picked up steam and Malaysia was on the verge of signing its first submarine deal.

In 2001, France gained the lead in submarine negotiations with Malaysia and bested offers from Sweden, Germany, the Netherlands, and Turkey. Until this development, several states provided compelling proposals to Malaysian defense planners. Sweden's proposal from its Kockums shipyard gave way to an offer for second-hand Type-209 hulls from Germany's Howaldtswerke-Deutsche Werft (HDW) shipyard; Turkey offered Type-209 submarines as well as a joint new-build program; the Netherlands made a strong case for two of its *Zwaardvis*-class submarines—bringing them to Malaysia as part of the sales pitch—and for new construction of Moray-class submarines at its Rotterdamsche (RDM) shipyard.⁷⁸ By November 2001, *Jane's Defence Weekly* reported that France and Malaysia had entered into the final negotiations for “two new Scorpène submarines and a refurbished Agosta-70-class diesel-electric submarine” from France's Direction des Constructions Navales (DCN) shipyard to be built as a joint

⁷⁶ J. N. Mak, “The Royal Malaysian Navy in a Changing Maritime World: The Challenges Ahead,” *Naval Forces* 11, no. 3 (1990): 73.

⁷⁷ McCaffrie, “Submarines for South-east Asia,” 35; “S'pore joins region in acquiring submarines.”

⁷⁸ “Malaysia Makes First Submarine Moves, Talks Launched with DCN,” *Defense Daily International* 2, no. 15 (2001), ProQuest, <http://search.proquest.com/docview/217295707?accountid=12702>; J. A. C. Lewis, “Malaysia Gets ‘Close’ to French Submarine Deal,” *Jane's Defence Weekly* 36, no. 31 (2001): 14.

venture with Spain's Izar shipyard.⁷⁹ Additionally, the French offer included a second Agosta-class submarine as an overseas training platform for Malaysian sailors during the construction of the Scorpène submarines.⁸⁰

Eventually, in June 2002, Malaysian defense minister Najib Razak announced a US\$972 million deal with DCN of France at a news conference and confirmed the parameters of the deal, which included two new Scorpène submarines, with one hull built in France and one in Spain respectively, and two used Agosta submarines for training.⁸¹ One significant element of the French deal, however, was that about half the cost of the deal was scheduled to be paid in Malaysian commodities, allowing it to avoid a large cash payment.⁸² Specifically, Najib confirmed that Malaysia would sell more than €230 million worth of palm oil to France and accept more than €130 million in French investment.⁸³ In total, the deal was worth approximately US\$2.2 billion when considering the cost of the platforms themselves and the weapons and training required to sustain the submarines.⁸⁴

In the post-Cold War environment, the Malaysian rationale for pursuing submarine technology has remained relatively constant from the imperatives that were first articulated in the 1980s. For example, in an August 1991 interview, Malaysian defense minister Najib explained the value of the South China Sea (SCS): "It is very important for us because of its security impact and...given this importance, we have realized that our military capabilities, naval and air, are very limited...so we must build up our capability in that area to ensure that our strategic interests are protected."⁸⁵ In his second stint as the Defense Minister in 2002, Najib made a remarkably similar statement,

⁷⁹ Lewis, "Malaysia Gets 'Close' to French Submarine Deal," 14.

⁸⁰ "No Decision Yet on Submarines," *New Straits Times (Malaysia)*, November 29, 2001, ProQuest, <http://search.proquest.com/docview/266646785?accountid=12702>.

⁸¹ "Malaysia Seals U.S.\$972 Maiden Deal to Buy Submarines," *Agence France Presse*, June 5, 2002, <http://www.singapore-window.org/sw02/020605a2.htm>.

⁸² Ibid.

⁸³ Ibid.

⁸⁴ "Underwater Aspirations Break the Surface."

⁸⁵ Quoted in Richardson, "Tightening security bonds," 19.

this time more direct in the rationale for submarines: “We have such a large body of water to police...[and] need submarines because it is a force multiplier; they can appear anywhere and because they are stealth [sic]...that makes our deterrent value much higher.”⁸⁶ These statements, taken ten years apart and in different geostrategic environments, remain relatively unchanged and emphasize the tremendous challenge for the RMN to extend its military influence. Thus, the value of submarines was and is for deterrence.

Second, the more pointed threat of China in the SCS is an even greater concern than it was in the 1980s and early 1990s and reinforces the idea that, in an environment of U.S.-Soviet disengagement, submarines can be a deterrent to a vastly superior naval opponent. According to J. N. Mak in a 1990 *Naval Forces* article, Admiral Wahab impressed upon the author that China and other regional powers “are potential threats ‘because they have the (naval) capability,’” and furthermore, as Mak asserted, that “should a naval confrontation arise...with, for example, the Chinese Navy, the RMN will be overwhelmed.”⁸⁷ This rationale by Admiral Wahab, advanced by Mak, made the more pointed charge that China would emerge from the disengagement of the great powers and leverage its regional standing using its navy to disable the RMN from responding in kind. This fear has largely been realized, especially in the last decade, as China has asserted itself in the SCS without an equivalent regional military challenger.

Yet, Malaysia publicly downplays the threat posed by China and avoids wholesale endorsement of U.S. policies in the region to avoid escalation; however, this may not reflect private reservations vis-à-vis China in the SCS that may have encouraged the purchase of submarines.⁸⁸ When speaking on increased U.S. engagement in the region, current Prime Minister Najib, the twice-former defense minister, asserted “our position is we do not want any development that could undermine this region as a region of peace

⁸⁶ Quoted in “Malaysia Seals U.S.\$972 Maiden Deal to Buy Submarines.”

⁸⁷ Mak, “The Royal Malaysian Navy,” 71–3.

⁸⁸ Cheng-Chwee Kuik, Nor Azizan Idris, and Abd Rahim Md Nor, “The China Factor in the U.S. ‘Reengagement’ With Southeast Asia: Drivers and Limits of Converged Hedging,” *Asian Politics & Policy* 4, no. 3 (2012): 338.

and stability nor anything that would increase tension in the region.”⁸⁹ In that sense, Najib acknowledged that antagonizing China was not in the best interest of Malaysia but failed to confess Malaysian naval weakness in the SCS to contest Chinese assertiveness. Thus, acquiring submarines would allow the RMN to offer a credible deterrent to China without directly challenging the Chinese People’s Liberation Army-in the SCS.⁹⁰ Adding credence to the China deterrence hypothesis, Malaysia has stationed its submarines in eastern Sabah with convenient access to the SCS.⁹¹

The post–Cold War environment lacks credible evidence to support the enforcement and prestige hypotheses as rationales for Malaysia to pursue submarines, and the statements made by prominent defense officials and military leaders lack the language that would suggest that submarines were pursued over a thirty-year period for enforcement or prestige purposes.

D. CONCLUSION

Deterrence was the most likely rationale for Malaysian submarine purchases made after the end of Cold War. The Malaysian military imperative to protect the state’s maritime interests in the South China Sea likely increased support for the development of a submarine fleet to deter states that could threaten Malaysian interests. Furthermore, the threat of China, downplayed publicly by Malaysia, may play into the private defense calculations of Malaysian defense planners and may have been part of the rationale for the purchase of *Scorpène*-class submarines.

⁸⁹ Ibid.

⁹⁰ Ibid., 65–73.

⁹¹ “Underwater Aspirations Break the Surface.”

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IV. SINGAPORE

A. INTRODUCTION

Singapore, the second submarine operator in Southeast Asia, is an interesting case study for undersea proliferation. Singapore's small size makes it curious that in the new millennium it procured a total of seven submarines from Sweden and two from Germany—acquiring more hulls than its much larger neighbors, Malaysia and Indonesia, combined.⁹² Although Singapore negotiated for and took delivery of its first submarine well after the end of the Cold War, its defense psychology and patterns of military spending prior to the collapse of the Soviet Union provide clarity into its submarine purchases

B. BACKGROUND/COLD WAR ERA

According to a Ministry of Defense publication, the first exploration of submarines was modest at best: “Singapore embarked on its submarine journey when eight RSN officers were sent to Eckernforde in Germany for a three week course in the late 80s.”⁹³ Yet, the training failed to lead to any negotiations during the Cold War. The lack of submarine-seeking behavior by Singapore during the Cold War, save sending a handful of officers to Germany, is likely a result of multilateral security guarantees and the subordination of the RSN to the air force and army, both in its role and in the defense budget. Despite these constraints to submarine purchases, the defense environment established during the Cold War enabled the military to explore, and eventually purchase, submarines as part of the RSN fleet in later years.

First, like its neighbor, Malaysia, Singapore was party to the implicit security guarantees afforded by the 1971 FPDA, which allowed the state to spend its military

⁹² Massimo Annati, “Asian Submarine Forces Taking Shape,” *Military Technology*, no. 5 (2009): 30; “Singapore Buys Two New Submarines,” *Xinhua News Agency - CEIS*, December 2, 2013, <http://search.proquest.com/docview/1463080791?accountid=12702>.

⁹³ “Backpaddle,” *Navy News*, no. 3 (2009): 13, http://www.mindef.gov.sg/content/imindef/mindef_websites/atozlistings/navy/navynews/2009/_jcr_content/imindefPars/0127/file.res/Navy3.pdf.

budget on other assets, namely for the Republic of Singapore Air Force (RSAF). The FPDA provided a multilateral forum, including the U.K., Australia, and New Zealand as the other parties, for a political-military dialogue in the event that Singapore or Malaysia faced an external threat.⁹⁴ The FPDA did not guarantee that the other parties would intervene militarily on behalf of Singapore, however, the involvement of major powers ensured that they would be consulted and engaged in the event of crisis and prevented submarines from gaining prominence as a necessary defense asset for the Republic of Singapore Armed Forces (SAF). According to one analyst, the FPDA's significance in this regard was that "the FPDA was an important construct and confidence building measure for the continued involvement of Commonwealth forces."⁹⁵

Second, aside from multilateral engagement, the FPDA created the Integrated Air Defense System (IADS) as part of the agreement, which provided for an Australian presence in Singaporean and Malaysian airspace under the command of an Australian Air Force officer stationed in Butterworth, Malaysia.⁹⁶ Under the agreement, member states would contribute personnel and assets for general air defense, although not explicitly to defend Singapore, which likely contributed to Singaporean defense planners' decision to invest heavily in the RSAF as part of the agreement. Undeniably, Singapore boasted the most capable air force within ASEAN in the span of a decade after IADS came into force—with more aircraft than Malaysia and Indonesia combined—and showed no signs of slowing investment in the RSAF.⁹⁷ Thus, the necessity of the RSAF and the spending required to increase its capacity left the RSN as a secondary defense service and its meager budget left little room to entertain submarines as a possibility.⁹⁸

⁹⁴ Bristow, "The Five Power Defence Arrangements," 1–5; Philip Bowring and Patrick Smith, "Cooperation is the New Name of the Game," *Far Eastern Economic Review* (January 13, 1983): 31.

⁹⁵ Johan Saravanamuttu, "Malaysian Foreign Policy and the Five Power Defense Arrangements," in *Five Power Defence Arrangements at Forty*, ed. Ian Storey, Ralf Emmers, and Daljit Singh (Singapore: ISEAS, 2011), 36–37.

⁹⁶ Bristow, "The Five Power Defence Arrangements," 5–6.

⁹⁷ Bowring and Smith, "Cooperation is the New Name of the Game," 31–2.

⁹⁸ Goldrick and McCaffrie, *Navies of South-East Asia*, Kindle edition, chap. 8.

The security situation of Singapore during the Cold War, however, was delicate because its former security guarantor, Great Britain, retreated from the region and was replaced with a loose guarantee of security built on engagement. Yet, the emergence of the RSAF reflected the state's commitment to defense that is significant for later naval developments and shaped its defensive philosophy—the poisonous shrimp. Accordingly, the poisonous shrimp mindset required that “Singapore’s forces should be sufficiently powerful to deter any regional power from trying to eliminate Singapore, simply by making the price too high.”⁹⁹ The sentiment was echoed by former Minister for Defense Yeo Ning Hong: “we are going to make absolutely sure that anybody who attempts to swallow us is going to get a fishbone that will perforate their throats.”¹⁰⁰ In short, Singapore was committed to building its own military and would avoid relying completely on its partners for defense, and the result was clear: by the end of the Cold War, Singapore was estimated to have allocated 6 percent of its gross domestic product (GDP) to defense—almost double that of most NATO members.¹⁰¹ The poisonous shrimp would become deadlier after the Cold War ended.

C. POST–COLD WAR ERA

Singapore’s failure to acquire submarines prior to 1991 was accompanied by statements from defense officials and spending during the era that predicted that submarines would likely be pursued in the future to promote seaward defense hundreds, or even thousands, of miles from Singapore’s coast because “if the enemy has reached the causeway it’s too late.”¹⁰² In light of the realization in the 1980s that a coastal defense force was insufficient, the RSN decided to expand its reach in the post–Cold War period with assets that could perform missions farther from the Singaporean coastline and immediate sea lanes. In 1997, then-Chief of the Navy Rear Admiral Richard Lim explained the new environment the RSN found itself in: “the end of the Cold War has

⁹⁹ Bowring and Smith, “Cooperation is the New Name of the Game,” 30.

¹⁰⁰ Ibid.

¹⁰¹ “The Shrimp With Teeth,” *Economist* (January 12, 1991): 29.

¹⁰² Quoted in Bowring and Smith, “Cooperation is the New Name of the Game,” 30; Edmond Dantes, “Naval Build-Up to Continue Unabated-Part II,” *Asian Defence Journal*, no. 5 (1992): 54.

given rise to a new strategic situation...that is beyond our control; so we do not, we cannot, simply wring our hands and hope—we have to go out there and grab it by the horns.”¹⁰³ Admiral Lim was speaking roughly two years after Singapore signed its first submarine deal with Sweden, and reflected the Singaporean position that it must continuously find ways to improve its security via the military and make the poisonous shrimp philosophy relevant in a more uncertain environment.

In the early 1990s, Singapore again sent naval officers to Germany for training, but this time also entertained offers for submarines from Australia, Germany, and Sweden.¹⁰⁴ By the summer of 1993, Australia appeared to be in the lead to sell Singapore its Collins-class, Type 471 submarines built by the Australian Submarine Corporation (ASC); however, Swedish submarine builder, Kockums, which owned the majority stake in the ASC, blocked the move on the grounds that the ASC had negotiated without the consent of the Swedish government.¹⁰⁵ In 1995, Singapore publicly expressed that it wanted submarines for research purposes and considered a German proposal for a submarine-training program and possibly second-hand hulls, coming close to a deal for four submarines.¹⁰⁶ Responding to July 1995 reports that a German deal was imminent, Minister for Defense Dr. Lee Boon Yang argued, “it’s still quite a long time off.”¹⁰⁷ Lee’s statement was accurate in that the German deal never materialized; however, his

¹⁰³ Quoted in “In Pursuit of Excellence—An Interview with the Chief of Navy,” Special Issue, *Naval Forces*, no. 2 (1997): 4.

¹⁰⁴ “S’pore Navy Studying Need for Submarines,” *Straits Times (Singapore)*, June 1, 1995, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=3SJD-PDC0-0058-X0TK&csi=237924&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

¹⁰⁵ Tim Satchell and Sheryl-Lee Kerr, “Sweden Key to Submarine Sales to Asia,” *Advertiser*, June 25, 1993, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=4B41-9Y70-01S8-84G7&csi=237924&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>; Martin Daly, “Swedes May Scuttle Sub Sales to Asia,” *Age (Australia)*, June 25, 1993, late edition, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=4P7G-Y270-TXN5-S2FT&csi=237924&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

¹⁰⁶ “S’pore Navy Studying Need for Submarines”; Tan Yong Meng, “Purchase of Submarines a Long Way Off: Boon Yang,” *Straits Times (Singapore)*, July 26, 1995, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=3SJD-PB60-0058-X2SN&csi=237924&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

¹⁰⁷ Quoted in Meng, “Submarines a Long Way Off.”

timeline was a bit off and scarcely two months later his successor as Minister for Defense announced that Singapore agreed to terms of a submarine deal with Sweden.¹⁰⁸

In September 1995, Singaporean minister for defense Dr. Tony Tan formally outlined the submarine deal with Kockums that included training for approximately 40 Singaporean sailors in Sweden and a second-hand *Sjöormen*-class submarine to be used in the training process.¹⁰⁹ Singapore touted the deal as exploratory and undertaken with the express purpose of “learn[ing] more about submarine operations and how they add to the capabilities of the RSN’s fleet.”¹¹⁰ Less than two years later, and after the success of its training efforts in Sweden, Singapore purchased three more of the *Sjöormen* submarines as an “opportunity buy” according to Tan, later classifying the submarines as the *Challenger*-class in the RSN.¹¹¹ A fifth hull was also procured for spare parts.¹¹²

The RSN has since made two submarine deals to replace its *Challenger* hulls and agreed to terms for two second-hand *Västergötland*-class boats from Sweden in 2005—later renamed the *Archer*-class—and two new-build Type 218SG submarines from ThyssenKrupp Marine Systems (TKMS) in Germany in 2013.¹¹³ The four newest boats were equipped with air independent propulsion (AIP), which allows the submarines to stay submerged for prolonged periods of time and thus increase the range and sustainability of the platforms.¹¹⁴ In less than twenty years, Singapore managed to

¹⁰⁸ Raoul Le Blond, “S’pore to Buy Second-Hand Submarine,” *Straits Times* (Singapore), September 24, 1995, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=3SJD-P7V0-0058-X4B3&csi=237924&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

¹⁰⁹ Le Blond, “S’pore to Buy Second-Hand Submarine”; “Big Task for Small Sub,” *Straits Times* (Singapore), September 24, 1995, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=3SJD-P7V0-0058-X4B2&csi=270944,270077,11059,8411&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

¹¹⁰ Quoted in Le Blond, “S’pore to Buy Second-Hand Submarine.”

¹¹¹ Ibid.; “Singapore Submarine Capabilities.”

¹¹² Annati, “Asian Submarine Forces Taking Shape,” 30.

¹¹³ Ibid.; “Singapore Submarine Capabilities”; “Singapore Buys Two New Submarines”; Jon Grevatt, “Briefing: Island intent,” *Jane’s Defence Weekly* (January 21, 2014), <https://janes.ihs.com.libproxy.nps.edu/CustomPages/Janes/DisplayPage.aspx?DocType=News&ItemId=++1598908&Pubabbrev=JDW>.

¹¹⁴ “Singapore Buys Two New Submarines”; Richard A. Bitzinger, “A New Arms Race? Explaining Recent Southeast Asian Military Acquisitions,” *Contemporary Southeast Asia* 32, no. 1 (2010): 56.

purchase a total of nine submarines after the RSN had never submerged a submarine of its own.

Motivations during each stage of submarine acquisitions have evolved from an exploratory study into the development a capable fleet with an advanced propulsion plant and combat systems suite that could hardly be deemed experimental. Beginning in 1995, the rationale for entertaining the purchase of or training on submarines was presented as benign and straightforward by then-Minister for Defense Lee: “submarine warfare is something that is so new to the RSN that we won’t even know where to begin in terms of specifying or identifying what submarine is suitable for us.”¹¹⁵ Two months after Lee’s statement, his successor, Tan clarified that if submarines were integrated into the RSN down the line then it would be to balance the force to better respond to a variety of roles—which could include deterrence and enforcement of its critical waterways.¹¹⁶ Echoing Tan’s statement, RSN Head of Naval Plans Colonel Simon Ong stated in 1997 “the RSN is evaluating the possibility of developing a submarine capability in the long term, as part of our efforts to build a navy with all-round capabilities.”¹¹⁷ Taking these statements together, it is difficult to determine the rationale for the purchase of Singapore’s first hulls—the *Challenger*-class—and the purchase added an undersea element that was previously absent. Submarines are a deterrent when they are known or suspected to be lurking but could also be an enforcement platform in Singapore’s case because of the proximity and significance of its waterways. Lee, when discussing the purchase of the *Challenger* hulls, added: “the economy is doing well and it is a cheap sub [and] its purchase will still be within the 5 per cent of GDP assigned to defense; so why not use it for some training?”¹¹⁸ The purchase and maintenance of a submarine—or four—even for training, is quite an expensive training aid. Nevertheless, Singaporean defense planners decided that the cost was worthwhile.

¹¹⁵ Quoted in Meng, “Submarines a Long Way Off.”

¹¹⁶ Le Blond, “S’pore to Buy Second-Hand Submarine.”

¹¹⁷ Quoted in “Building Tomorrow’s Navy – an Interview with Head of Naval Plans,” Special Issue 2/97, *Naval Forces* 18, no. 2 (1997): 20.

¹¹⁸ “Why S’pore Bought Submarines,” *Straits Times (Singapore)*, October 11, 1995, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=3SJD-P730-0058-X37C&csi=237924&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

The RSN evolved into what Singapore deemed its 3G Navy, whereby the RSN modernized and added hardware to its fleet to cover the spectrum of missions that Singapore required of its military. Speaking on the RSN and submarines in 2009, Chief of the Navy Rear Admiral Chew Men Leong explained that “the RSN is currently in the midst of realizing its capabilities as the [3G] navy” and that submarines, in this context, “have enabled the RSN to build a Navy with balanced capabilities, particularly in the underwater dimension.”¹¹⁹ When asked why AIP, a significant advancement from traditional diesel-electric submarines, was necessary for the *Archer*-class submarines, Admiral Chew deflected the question and spoke more generally about adding more advanced hulls: “When integrated into the RSN, they will form the sharp edge of our strike capability and strengthen our deterrent edge.”¹²⁰ Thus, it can be argued that the purchase of AIP submarines, specifically the *Archer*-class and the latest German *Type 218SG* hulls, are intended primarily as deterrence platforms when considering the stealth and endurance capabilities of AIP and Admiral Chew’s statements.

D. CONCLUSION

The purchase of AIP submarines, and submarines more generally, best fit into the category of deterrence purchases for Singapore. The Cold War geopolitical position eased after the Soviet Union collapsed, however, the rise of other state and non-state threats in its place supports Singapore’s poisonous shrimp deterrence philosophy of yesteryear that arguably continued into the new millennium, packaged as building a 3G Navy that can both deter enemies and combat disruptions to commerce. Using either name, the bottom line is that the strategic vulnerability of Singapore has not changed over time—the borders are still the same, its neighbors still large, and its geographical significance has only increased since independence in 1965. Indeed, Singapore still needs to be a poisonous shrimp, and the deterrence that a robust submarine fleet provides may very well be the fishbone to an enemy’s throat that Minister for Defense Yeo described.

¹¹⁹ Quoted in “The Republic of Singapore Navy: Interview With Rear-Admiral Chew Men Leong, Chief of the RSN,” *Military Technology*, no. 5 (2009): 27–28.

¹²⁰ *Ibid.*; 28.

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V. VIETNAM

A. INTRODUCTION

United Vietnam, and divided North and South Vietnam before it, was actively engaged in combat throughout the Cold War and was unable to engage in robust negotiations for new military hardware, save the military aid that came from the United States and Soviet Union at varying points during the Cold War era. After the collapse of the Soviet Union, Vietnam embarked on a path of military modernization that included the eventual purchase of submarines. Although Vietnam was the latest on the scene with respect to submarine acquisitions, it will have the largest submarine fleet in Southeast Asia once it takes delivery of its six submarines that were purchased in 2009.¹²¹

B. BACKGROUND/COLD WAR ERA

Vietnam, both in its unified and divided form, expended most of its military energy during the Cold War era fighting one enemy or another, whether it was France, the United States, Cambodia—or the North versus the South—and combat operations prevented military planners from investing their collective energy in entertaining offers for advanced military hardware like submarines. Yet, after Vietnam concluded its war in Cambodia and regional hostilities had cooled, Soviet submarines began to appear in Cam Ranh Bay as early as 1979 and the question of then united Vietnam's interest in submarines began to surface.¹²² At the time, the arrival of a Soviet submarine was perhaps the Soviets leveraging a naval base of a friendly Communist ally to build up its regional military presence; however, as of 1985, it appeared more likely that the Soviets were also training Vietnamese submariners, made more apparent by the arrival of additional *Whiskey*-class Soviet submarines.¹²³ By the close of the Cold War, Vietnam

¹²¹ “Underwater Aspirations Break the Surface.”

¹²² “Soviet Submarine Goes to Vietnam.” *Globe and Mail*, May 11, 1979, ProQuest, <http://search.proquest.com/docview/386965244?accountid=12702>.

¹²³ Drew Middleton, “Soviet Buildup in Far East Causing U.S. Concern,” *New York Times*, January 30, 1984, ProQuest, <http://search.proquest.com/docview/424850228?accountid=12702>; Desmond Wettern, “Soviet Submarines for Vietnam, But Whither Admiral Gorshkov?” *Pacific Defence Reporter* 11, no. 9 (1985): 14.

had yet to purchase a single hull—regardless of any favorable Soviet deal that could have been offered—because of financial constraints.¹²⁴

The late-Cold War Soviet submarine staging in Cam Ranh Bay developed an indigenous Vietnamese interest in submarines that manifested itself via the training of Vietnamese submariners, which the Soviet Union was willing to provide to its ally in exchange for the use of Vietnamese ports. According to some analysts, Soviet support for Vietnamese submarines—and the staging of Soviet hulls—during the Cold War was seen as an opportunity for the Soviet Union to not only position naval assets in Southeast Asia but also to develop a regional proxy, much like Moscow had developed in Cuba.¹²⁵ Vietnam itself avoided confirming its submarine ambitions when the Soviet submarine presence increased; however, its relations with China would have implications in the post-Cold War environment and Vietnam's decision to eventually purchase submarines.

The territorial disputes in the South China Sea among several claimant states, including Vietnam and China, led to the militarization of these disputes beginning in the 1970s and, by the end of Cold War, open animosity between China and Vietnam. These trends may have encouraged Vietnamese support for Soviet submarine training in the mid-1980s. As early as 1974, China and then-South Vietnam began to assert more public claims to the Paracel and Spratly Island chains, culminating in the exchange of gunfire and killing of Vietnamese soldiers.¹²⁶ In 1988, tensions over China's build-up in the Spratly Islands resulted in a confrontation that killed as many as 70 Vietnamese soldiers and sailors.¹²⁷ The tension that began to percolate in the South China Sea in parallel with Soviet-sponsored submarine training would carry over into the post-Cold War environment.

¹²⁴ McCaffrie, "Submarines for South-east Asia," 36.

¹²⁵ Wettern, "Soviet submarines for Vietnam," 14.

¹²⁶ "China, S. Vietnam Fight At Islands," *Los Angeles Times*, January 19, 1974, ProQuest, <http://search.proquest.com/docview/157319454?accountid=12702>; "The Paracel Islands Incident," United States Central Intelligence Agency, memorandum (1974), ProQuest, <http://search.proquest.com/docview/1679087794?accountid=12702>.

¹²⁷ "Vietnam, China Clash Over Islands," *St. Louis Post-Dispatch*, March 16, 1988, ProQuest, <http://search.proquest.com/docview/1477175591?accountid=12702>; Paul Anderson, "Asian Nations Flexing Over Tiny Island Group," *Chicago Sun-Times*, August 7, 1988, ProQuest, <http://search.proquest.com/docview/257307133?accountid=12702>.

C. POST-COLD WAR ERA

After the collapse of the Soviet Union, Vietnam's major military supplier, Vietnam was on its way to acquiring submarines after decades of warfare and budget constraints had previously prevented it from doing so.¹²⁸ As early as the late 1990s, Vietnam was reported to have taken delivery of two mini North Korean *Yugo*-class submarines, although neither the terms of the deal nor the acquisition were publicly confirmed and the operational feasibility of the two platforms was in doubt.¹²⁹ A decade after acquiring the mini submarines, details of a deal for six *Kilo*-class hulls from Russia began to surface and were later confirmed in December 2009 when Vietnamese Prime Minister Nguyen Tan Dung visited Moscow.¹³⁰ The terms of the deal were for six Project 636MV/*Kilo*-class submarines built by Russia's Admiralty Shipyard to be delivered at a cost of approximately US\$1.8 billion, with one new hull delivered per year once construction was complete.¹³¹ Unlike the Russian *Kilo*-class submarines sold to China in 2002, specifically the Project 636-class nomenclature, the updated variant sold to the Vietnam People's Navy (VPN), labeled the Project 636MV-class, is considered more advanced and is outfitted with the latest anti-ship missile, radar, and sonar technology compared to the earlier Chinese hulls.¹³² As of the time of this writing, the VPN has

¹²⁸ "Regional Submarine Programme Stalled," *Jane's Defence Weekly* (February 18, 1998): 34.

¹²⁹ McCaffrie, "Submarines for South-east Asia," 36; "Underwater Aspirations Break the Surface"; "Vietnam's Russian Restocking: Subs, Ships, Sukhois, and More," *Defense Industry Daily*, last modified December 11, 2014, <http://www.defenseindustrydaily.com/vietnam-reportedly-set-to-buy-russian-kilo-class-subs-05396/>; Torode and Chan, "Vietnam Buys Submarines to Counter China."

¹³⁰ "Vietnam's Russian Restocking."

¹³¹ Ibid.; "Underwater Aspirations Break the Surface"; Torode and Chan, "Vietnam Buys Submarines to Counter China."

¹³² "Vietnam's Russian Restocking"; "Underwater Aspirations Break the Surface"; "Compare 636 Kilo of Vietnam (636MV) with China (636MK)," Khúc Quân Hành, accessed September 8, 2015, http://khucquanhanh.vn/index.php?option=com_content&view=article&id=68:so-sanh-kilo-636-cua-viet-nam-636mv-voi-trung-quoc-636mk&catid=15:ky-thuat-quan-su; Carlyle A. Thayer, "Russian Subs in Vietnam," USNI News, U.S. Naval Institute, last modified February 5, 2013, <http://news.usni.org/2012/08/20/russian-subs-vietnam>.

taken delivery of four of its six submarines: HQ-182 *Hanoi*, HQ-183 *Ho Chi Minh City*, HQ-184 *Hai Phong*, and HQ-185 *Khanh Hoa*.¹³³

The rationale for Vietnam's submarine purchases is widely attributed to the asymmetric naval threat posed by the PLAN in the South China Sea, which have the potential to become further militarized. In other words, Vietnam purchased submarines for deterrence against a more aggressive China in the South China Sea maritime territorial disputes.¹³⁴

Statements made by Vietnam's defense minister, Phung Quang Thanh, in 2011 attempted to deflect the deterrence rationale but he was ineffective in denying the anti-Chinese imperative. Shortly after Vietnam agreed to its first significant submarine deal, Phung asserted that the deal was "definitely not meant as a menace to regional nations."¹³⁵ Yet, Phung also argued that the submarines were purchased "'completely in self-defense' though Hanoi would act to deter anyone who tried to compromise its sovereignty."¹³⁶ In other words, the Defense Minister argued that the *Kilo* deal was not aimed at China specifically but that the submarines would act as a deterrent against states that violated what Vietnam perceived as its sovereignty, or in this case claims of sovereign territory in the South China Sea. In short, Phung failed to mention China by name but signaled that the purchase was aimed generically at regional threats—of which China is the biggest source.

¹³³ "Vietnam's Russian Restocking"; "Fourth Submarine Arrives at Cam Ranh Port," *Hanoi Times*, last modified July 4, 2015, <http://hanoitimes.com.vn/social-affair/2015/06/81e094be/fourth-submarine-arrives-at-cam-ranh-port/>; "Latest Kilo Class Submarine Launched and Named 'Da Nang,'" *DaNang Today*, last modified February 19, 2015, <http://www.baodanang.vn/english/society/201502/latest-kilo-class-submarine-launched-and-named-da-nang-2397107/>.

¹³⁴ Pomfret, "Militaries Bulk Up in Southeast Asia"; Torode and Chan, "Vietnam Buys Submarines to Counter China."

¹³⁵ Quoted in "Vietnam to Get Sub Fleet," *Daily Pak Banker*, August 5, 2011, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=53GG-2WN1-JDKC-R2DG&csi=270944,270077,11059,8411&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

¹³⁶ Shefali Rekhi and Elgin Toh, "Vietnam Buying Six Subs for Self-Defence: Minister," *Straits Times (Singapore)*, June 6, 2011, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?lni=531G-7FD1-DYX3-Y32T&csi=270944,270077,11059,8411&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true>.

The second argument that supports the deterrence rationale for purchasing submarines in conjunction with Defense Minister Phung's statements is the state's definition of its sovereign territory itself. Vietnam, like China, considers itself the rightful sovereign over the entirety of the Paracel and Spratly Islands and views competing claims to the territories as illegitimate and furthermore a violation of its sovereignty.¹³⁷ Between 2009—before Vietnam formalized its submarine deal with Russia—and the fall of 2010, several incidents at sea and political moves by China, including fishing bans and seismic exploration surveys, prompted Vietnam to make formal statements in response.¹³⁸ Specifically, in August 2010, Vietnamese foreign ministry spokeswoman Nguyen Phuong Nga issued a statement on the Chinese activities in the South China Sea: "Vietnam demands that China immediately cease and stop the recurrence of these violations of Vietnam's sovereignty."¹³⁹ The statement by Nguyen came roughly one year before Phung explained that the submarine deal was for self-defense and deterrence against violations of sovereignty. It is difficult to argue that the timing of the submarine deal in parallel with these statements was for an alternative purpose.

Third, the purchase of submarines as part of the larger package of military hardware that Vietnam purchased from Russia was aimed to counter a large asymmetric surface naval threat, made apparent both by the types of hardware and the anti-ship weapons that each platform employs. In the case of VPN's growing fleet of Project 636MV hulls, the threat of a lurking submarine is enough to deter a much larger surface naval threat.¹⁴⁰ In addition to its submarines, the menu of military hardware that Vietnam purchased that is significant to this research are the platforms equipped with anti-ship missiles: strike aircraft, coastal patrol vessels, and frigates, which are all a part of an anti-access/area denial (A2/AD) strategy.¹⁴¹ Yet, even if Vietnam were able to double its

¹³⁷ "The Paracel Islands Incident"; Pomfret, "Militaries Bulk Up in Southeast Asia."

¹³⁸ Pomfret, "Militaries Bulk Up in Southeast Asia."

¹³⁹ Ibid.

¹⁴⁰ Beng, "Submarine Procurement in Southeast Asia," 58.

¹⁴¹ Wendell Minnick, "Tighter Budgets Limit Southeast Asian Plans," *Defense News*, last modified April 13, 2014, <http://www.defensenews.com/apps/pbcs.dll/article?AID=2014304130015>.

purchase of aircraft and ships, it would be unable to counter the superior PLAN force.¹⁴² This is where the purchase of submarines becomes significant.

According to one analysis, “China is developing a powerful submarine force to form an ‘unsymmetrical superiority’” vis-à-vis the U.S. and “Vietnam is likely learning from China in forming an ‘unsymmetrical superiority’” against its own adversary in China—perhaps one attraction to the more advanced *Kilo* submarine that it purchased from Russia.¹⁴³ According to another analysis, expanding on the A2/AD concept, submarines are force multipliers that make up for the numerical disadvantage of the VPN compared to the PLAN:

Vietnam’s acquisition of a significant submarine force has been a way to develop an interim deterrent capability rapidly. This can be used to enforce, and if needed, contest its sovereignty in the South China Sea. Even with the operationalization of all its recent surface platform acquisitions, the VPN will still be significantly inferior to China’s naval forces; the ability to deploy submarines provides the VPN with a means to undertake a sea denial strategy against China in the disputed territory, instead of having to go head-to-head in a naval conflict.¹⁴⁴

The alternative hypotheses that this thesis explores are less convincing in the Vietnamese case compared to the evidence that supports the deterrence imperative. First, there is little evidence to support enforcement as a rationale for purchasing submarines, even if there is a need for enforcement more generally. Instead, Vietnam is interested in claiming and maintaining sovereignty over the contested maritime domain of the Spratly and Paracel island chains. Second, the prestige imperative to explain submarine purchases is largely absent in statements made by Vietnamese officials. Aside from the normal pomp and circumstance seen during the commissioning of new ships, the new

¹⁴² Beng, “Submarine Procurement in Southeast Asia,” 58.

¹⁴³ “Vietnam’s Plan to Buy Russian Subs Complicates Sea Dispute – Chinese Agency,” *Zhongguo Tongxun She*, May 8, 2009, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=7VMV-0R71-2R51-72K5&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>.

¹⁴⁴ “Vietnam’s Plan to Buy Russian Subs.”

Vietnamese submarines are not being publicly promoted as an asset to boost the VPN's image internally or abroad.

D. CONCLUSION

The post–Cold War environment failed to sever the diplomatic and military relationship between Moscow and Hanoi, and the partnership reached its pinnacle with the 2009 submarine deal. Vietnam's purchase of six advanced *Kilo*-class submarines was widely described as a deterrent response to China's military superiority over Vietnam in the context of the maritime disputes between the two states. The evidence strongly supports the imperative of this asymmetrical response. Vietnamese defense officials were unable to offer a compelling counter-narrative to champions of the deterrence hypothesis that would better explain the rationale for this largest purchase of submarines in Southeast Asia in the post–Cold War era. Once Vietnam receives its final two hulls in the near future, the operational future of the VPN submarine fleet will likely reflect the deterrence rationale. Finally, there is little evidence to support enforcement or prestige as a rationale for submarine purchases as reflected in statements made by Vietnamese defense and Communist Party officials in the lead-up to and aftermath of the announcement of the submarine deal.

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VI. CONCLUSION

A. REGIONAL TRENDS AND PATTERNS DURING POST-COLD WAR ERA

The cascade of military technology that proliferated after the dissolution of the Soviet Union and the end of the Cold War marked an era of evolving militaries and defense apparatuses that both reflected existing vulnerabilities and posed future sources of conflict. The purchase of submarines, however, created an exponential increase in military capability that necessitated its own body of research. The case studies of Indonesia, Malaysia, Singapore, and Vietnam provided evidence that supported or refuted the hypotheses of deterrence, enforcement, and prestige as rationales for submarine purchases.

1. Deterrence

Perhaps the strongest hypothesis that was supported by each case study this thesis examined was deterrence. The end of the Cold War saw the Soviet Union retreat from its overseas activities and the United States respond with similar disengagement. Thereafter, new and improved military hardware and armament were necessary to ensure the state security. Specifically, in each of the case studies, defense officials made statements that reflected deterrence-minded rationales for the purchase of submarines to convince an adversary not to engage in undesirable military activity. Furthermore, the deterrence argument appears to be a regional pattern with respect to submarine proliferation. For example, although the Philippines lacks its own submarine fleet, Philippine Vice Admiral Jesus C. Millan confirmed that it began research as early as 2011 to field an indigenous submarine fleet with designs on countering Chinese aggressiveness in the South China Sea, which degraded the Philippine position in the Scarborough Shoal in 2012.¹⁴⁵

¹⁴⁵ “PH Needs a Submarine, Says Navy Chief,” *Philippines Daily Inquirer*, May 29, 2015, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=5G3G-1331-F0FB-T4K3&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>; Raul Dancel, “Maritime Spats ‘Stirring Undersea Arms Race’; Submarine Build-up May Spark More Clashes: Think Tank,” *Straits Times (Singapore)*, December 22, 2014, LexisNexis Academic, <http://www.lexisnexus.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=5DWM-HR51-JCF2-84BT&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>.

2. Enforcement

The supporting evidence for enforcement as a rationale for submarine purchases was weak, and even then only seen in the Indonesian case. For Indonesia, enforcement using submarines was perceived as necessary for the state to demonstrate its resolve to patrol its waterways and disputed maritime area. In the territorial dispute between Indonesia and Malaysia in particular, the dispute was legally resolved but still festers in the Indonesian psyche. Malaysia, however, considers the dispute settled with Indonesia and has made no statements that would indicate it sought submarines for enforcement. Vietnam, on the other hand, is actively engaged in a longstanding territorial dispute with China but is past the point of enforcing its claim and appears to have moved directly to deterrence, which required the purchase of submarines for this purpose instead of for the dual rationales of deterrence and enforcement.

3. Prestige

The hypothesis that states purchased submarines primarily for prestige lacks empirical evidence among these case studies to support that hypothesis. Although states such as Indonesia may have purchased submarines for prestige in the late 1970s, the security and financial environment of the post–Cold War period demanded that states carefully consider each purchase, and prestige was difficult to use as a guiding rationale for submarine purchases.

In the Southeast Asian case studies of this thesis, prestige rationales—if they even existed—for submarine purchases in the aftermath of the Cold War were swiftly met by the onset of the Asian Financial Crisis. The dramatic contraction of the economies and GDPs in Southeast Asia forced politicians, economists, and defense planners alike to rethink their pre-crisis strategies and mandated more conservative models of budgeting and spending.¹⁴⁶ Thus, defense officials in the case studies herein avoided articulating their states' positions for submarine purchases for prestige, but instead for more critical rationales of deterrence and enforcement. Furthermore, future submarine proliferation

¹⁴⁶ “Ten Years On: How Asia Shrugged Off Its Economic Crisis,” *Economist*, last updated July 4, 2007, <http://www.economist.com/node/9432495>.

examples from the region provide salient evidence that there is a regional aversion to spending predicated on prestige.

B. IMPLICATIONS FOR FUTURE SUBMARINE ACQUISITIONS

Regional patterns for submarine proliferation in Southeast Asia can illuminate future undersea developments in the region and highlight the strength of the deterrence and enforcement arguments. In the case of the Philippines, as mentioned earlier, the state is embroiled in a maritime territorial dispute with China, with which it has a military asymmetry. Like Vietnam, a Philippine rationale for purchasing submarine would likely be to deter China from further strengthening its maritime position at the expense of the Philippines.

In another future proliferation example, Thailand is also considering the purchase of submarines. Its domestic dialogue offers a real time look at the competing hypotheses that this thesis explored.¹⁴⁷ The Thai government is considering the purchase of three Chinese-made submarines for territorial defense, but many in Thailand instead see the purchase as one of prestige and as an opportunity to appeal to the Chinese.¹⁴⁸ In particular, Admiral Narongphon Na Bang Chang stated, “Thailand needs submarines to make other countries stand in awe.”¹⁴⁹ The admiral’s argument is under heavy domestic scrutiny because many Thais argue that prestige is an insufficient rationale to spend large amounts of money and because the end of the Cold War has been a peaceful time for the state, devoid of threats that would mandate deterrence or enforcement imperatives to buy

¹⁴⁷ “Subs Plan Tests Navy to Sink or Swim-The Navy Wants to Splash 36 Billion Baht on Three Chinese Submarines to Defend Our Shores, But Not Everyone’s Convinced,” *Bangkok Post (Thailand)*, August 9, 2015, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=5GN2-1VK1-F0FB-T473&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>; Supalak Ganjanakhundee, “@HD New Head 48 Light; Submarines for What? We Face No Maritime Threats,” *Nation (Thailand)*, July 8, 2015, LexisNexis Academic, <http://www.lexisnexis.com.libproxy.nps.edu/lnacui2api/api/version1/getDocCui?oc=00240&hnsd=f&hgn=t&lni=5GD6-DHR1-DYTP-P2XW&hns=t&perma=true&hv=t&hl=t&csi=270944%2C270077%2C11059%2C8411&secondRedirectIndicator=true>.

¹⁴⁸ “Subs Plan Tests Navy”; Ganjanakhundee, “Submarines for What?”

¹⁴⁹ “Subs Plan Tests Navy.”

submarines.¹⁵⁰ Furthermore, according to one analyst, the purchase could actually be counterproductive: “The Thai elite knows very well that Vietnam built up its military strength because of conflict in the South China Sea, based on tension with its giant neighbor China...[and] Vietnamese submarines cannot be regarded as a threat to Thailand; on the contrary, if Thailand purchased submarines from China, it could pose a challenge to Hanoi.”¹⁵¹

The Thai and Philippine cases are yet to be resolved. Yet, both cases provided evidence that supports the conclusions of this thesis—that deterrence and enforcement are strong rationales in the post–Cold War environment for purchasing submarines, but not prestige. Furthermore, the Philippines’ stated rationale to purchase submarines lacks formidable opposition because there is a deterrent imperative to do so, and the Thai narrative of prestige is under siege from opponents because its deterrent and enforcement arguments are weak. In short, future proliferation is most likely when a deterrence or enforcement imperative is present, but prestige still has some champions in governments that assert it is a worthwhile rationale to purchase submarines for their broader political value.

¹⁵⁰ Ibid.

¹⁵¹ Ganjanakhundee, “Submarines for What?”

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